

AMERICAN JOURNAL
OF
PHOTOGRAPHY

THOS. H. McCOLLIN, Managing Editor.

JULIUS F. SACHSE, Editor.

VOL. XVI.

JANUARY, 1895.

No. 181.

EIGHTEEN NINETY-FIVE.

A HAPPY NEW YEAR to the whole guild of photographic toilers. No matter to what special department you claim fealty; professional or amateur; artistic or mechanical; scientific or commercial; manufacturer or seller. THE AMERICAN JOURNAL OF PHOTOGRAPHY wishes you all, from the humblest perambulating tintype-taker to the artistic photo-impressionist, a prosperous and busy year.

Another year has rolled by: the Nineteenth Century, that so far as scientific research and activity is concerned was the most important in the world's history, is gradually drawing to a close. But six more years and we will be in the Twentieth Century. At the present rate of human progress, who can foretell what the next century will bring forth.

There are two great problems that confront the scientific world, viz., photography in color,—*i.e.*, the fixing of the image in the concentrated colors as it appears on the ground glass; and a method of overcoming gravity. Whether these two problems will be solved in the near future, or during the coming century, is an open question that time alone can answer.

So far as the past year is concerned, there is but little photographic progress to chronicle. The most gratifying feature of

the year is the increased application of photographic processes in the various arts, sciences and industries.

The past year it may be said was a prosperous one for professional photographers of known reputation for good and careful work, and who adhered to remunerative prices for good and artistic work.

For the cut-price operator the year was less prosperous. The public have evidently learned that good honest work cannot be done at the ridiculous cut prices set forth by catch-penny advertisements.

Another noticeable feature of the last 365 days has been the introduction of several flash-light machines, expressly for the professional photographer, for use in the studio during the dark winter days, as well as at night.

The first of these apparatus, demonstrating the practical utility of the principle involved, soon brought out cheaper and more practical apparatus, where, with the use of Blitz-Pulver, portraiture was a possibility during the whole twenty-four hours of the day.

As to the advances in color photography, we are no nearer to its solution than when the process of Cross and Du Hauron was first given to the world over a score of years ago. It is true attempts and experiments continue to be made at home and abroad. Specimens are shown by projection and in scientifically-constructed apparatus that astonish and please the general public. But so far as the vital question is concerned, we are apparently as far from the actual solution as ever.

In the three-color or photo-chromatic process; viz., printing from plates in three colors, in which orthochromatic photography and photo-spectroscopy play so important a part, great strides have been made. Specimens showing the great progress made in this branch of the art-science were shown at the late New York exhibition. Still, even in this branch, there remain certain mechanical difficulties that are yet to be overcome to make the process an absolute commercial success.

In conclusion the Editor will say a word for the publishers and himself. By renewing your subscriptions and advertisements

promptly, you will encourage the staff to greater efforts, and tend to lighten their labors in your interests.

Again wishing you all a happy and prosperous New Year, we will but say that our course in the past will be our guide for the future.

A SCHOOL OF PHOTOGRAPHY.

MILTON B. PUNNETT.

AS straws show which way the wind is blowing so the articles which appear spasmodically in the photographic journals emphasizing the need of a school devoted exclusively to photography and the closely allied sciences, give indications of the leaven working beneath.

At present a great deal of experimental work is being done in photography, but most of it in such unscientific hap-hazard manner that much valuable material and time is being wasted. Even journals whose editors are supposed to be competent to instruct the seekers after knowledge, publish articles and formulæ containing errors in chemistry and physics, outvieing those of the ancient alchemists and physicists.

If some of the "Instructors" are so much in need of scientific knowledge in what condition must the pupils be? A School of Photography would not only prove an inestimable blessing in spreading scientific knowledge and modes of investigation, but would also elevate the art side, and thus have an æsthetic as well as a scientific mission.

A discussion of the merits and demerits of two of the leading schools of photography in Europe, in which the writer studied, may, possibly, be of some value in showing what features to adopt and what to avoid in our future American school. This tone of certainty may sound strange at the present status of affairs but no apology is necessary as time will show. Under Prof. Dr. H. W. Vogel in the Imperial Polytechnical School at Berlin the writer commenced his studies abroad and for that reason will begin with his experience there. Prof. Vogel's useful-

ness is curtailed to quite a large degree by the fact that his department is what one might call a side show to this famous school.

Being subjected to the rules of the school, the hours of the department are arranged so as to allow the students in the other departments, *e.g.* chemistry, etc., to attend, and to a student wishing to devote his whole time to photography the number of hours allowed is very unsatisfactory. Berlin being situated so far north the shortness of the days, in winter, interferes with photographic work considerably. The amount and variety of photographic literature on file in the library are far from what they should be. To a student wishing to get an insight into photography and having some other course as a regular study, it offers good advantages.

The lectures of Prof. H. W. Vogel on light, photography, and spectroscopy are entertaining and instructive. But let us leave the Pride of Germany and set up our tripod "ins da schöne Wien an Donau's strand."

Nestling on the slopes of the hills which surround it like a horseshoe of good luck, with the blue Danube to guard it from the plains beyond, Vienna has many natural advantages for a school of Photography. The Imperial School of Photography, or, to give it its full name, the K. K. Lehr und Versuchsanstalt für Photographie und Reproductions Verfahren, under the management of Director Prof. J. M. Eder is, I believe, the only school in the world in which all branches of photography are taught by a corps of competent teachers. In saying this I do not wish to cast reflections upon other schools in which one, and in some cases perhaps two, professors are trying their best to give instructions in subjects they never had any practical experience in. What I mean to say is, that the school in question is devoted exclusively to the teaching of theoretical and applied photography, and that its teachers are practical men in the branches they teach. Being a school complete in itself it is not burdened with rules and regulations made for another school and detrimental to its welfare.

From eight in the morning until eight at night instruction is imparted in photographic chemistry, physics, photo-mechanical

printing methods, reproductive processes, composition, retouching and general gallery work, photographic printing methods, drawing, emulsion making, etc.

In addition to doing original research work the professors investigate new photographic discoveries and devices and report the result in the *Photographische Correspondenz*, to the students and also at the Vienna Photographic Society.

Numbered among the students are many from other countries, as well as young ladies and men employed in galleries in the city, and who, owing to the long school hours, find some opportunity to attend.

The library is well furnished with many of the leading German, English and French periodicals, in addition to a fine reference department.

Certain improvements in the arrangement of the rooms, their entrances, etc., suggest themselves to the writer, but taking it all in all it is a splendid school with a noble mission.

In conclusion the writer would suggest a few points which he believes to be necessary to make a success of "The National School of Photography."

First.—It should be situated in a large city so as to give the many who are daily employed a chance to attend.

Second.—It should have a government for itself, and not be hampered by rules made to govern an institution having altogether different objects in view.

Third.—It should be equipped with the most improved apparatus and with a sufficient number of competent teachers to allow them time for scientific investigations, the expense of such investigation being borne by the school and the results to be published and to become public property.

Photography counts among its devotees men of wealth and leisure, and I know that hearty response will follow if a commencement is only made. It will come. It is only a question of time, and who will be the one or ones to win a name as founders in this noble project?

RETOUCHING HELPS.

BY R. W. HARRISON.

A CERTAIN amount of penciling and an unlimited amount of brush work can be done on the dry-plate negative without any preparation whatever ; but the brush work is always crude, and leaves white marks on the prints, while the penciling on the unprepared negative is ineffective in the case of nearly everything visible on the print.

Much has been said and written on the preparation of retouching "dope" (as it is now almost universally named), and many and complicated formulas have been given, but simplicity is nearly always best, and I have found by experience that I can use any or all the dopes with equal success. Some years ago I undertook to operate and retouch in a gallery where each of a half a dozen predecessors had made and left behind him a quantity of his pet dope ; I used it all up by simply putting a small quantity of it in a one-ounce wide-mouthed bottle and thinning it down with turpentine ; the bottle was left open and the solution was dipped out with a small stick. The whole secret is in aerating or oxidizing the turpentine, and if this is thoroughly done no other gum is needed. In my studio the turpentine bottle is never corked, neither are the dope bottles. For a beginning, damar, balsam of fir, or rosin may be used, a very small quantity, about forty grains to the ounce, being enough, but as it grows older and the turpentine gets gummy, little if any gum is needed unless it is being used up very rapidly.

My method of putting it on may be helpful to some. When the solution is fresh it is not as effective as it is later, so to help matters I put on three or four drops, and if the negative does not call for any hard work I simply rub it off dry, with a small piece of Canton flannel folded to four thicknesses ; but if the negative is one that has freckles or kindred calamity, I take the rag and rub it lightly over the four drops of dope to spread it on, then I stop for a moment and again begin to rub, but not yet on the face or places to be worked, but merely to dry the edges ; in the mean-

time the thin film over the face has been getting tacky, and it is briskly rubbed, and the more it is rubbed inside certain limits, the better the tooth will be. I like to keep the same rag and use it till it gets too full for usefulness, when I reluctantly start a new piece, still retaining my old piece for difficult negatives, until the new rag has got a little gummy.

Some people are afraid to spread the dope over the negative, saying it catches dust, but if used in the way I indicate, it will not catch dust, and will prevent patent papers from sticking.

With this system I can ordinarily put all the work on a negative that I wish, but sometimes it is desired to do some still heavier work in hair or drapery, and I have found the following very effective:

Gum sandarac	. . . . .	35 grains
Ether	. . . . .	2 drachms
Gasoline	. . . . .	6 ounces

Dissolve the gum in the ether, add the gasoline, and shake.

This is easily made and inexpensive, and after shaking awhile can be used at once, although it is better and cleaner to let it settle. It should be simply flowed over the plate like a varnish and not heated. The bottle containing this should be kept well-corked, and the varnishing done at a distance from flame.

For helping out a negative where parts are too strong I have found it good to take ground-glass substitute, add a little crimson aniline dye to it and flow it on the back of the plate; the lights can be scraped away, and shadows left covered with the dyed solution. This, of course, must be done carefully or the edge will show. This is especially effective in landscapes where the negative has clouds which do not print.

—*American Annual of Photography.*

Night-work is a much exaggerated evil of the physician's life. In the first few years of city practice there is not a superabundance of either day or night calls, and to one who falls asleep full of apprehensions as to the success of the future, the jingle of the telephone breaks in upon his troubled dreams like sweet music.—*A. L. Benedict*

HINTS FOR PHOTOGRAPHIC-PORTRAIT ARTISTS.

FROM THE GERMAN.

THE following fifteen hints for portraiture were given by J. Gaedike of Berlin, when asked wherein lay the great success of his photographic work.

1. The photographic art, must sever the bands of the rigid expression of the sitter.
2. The way to do this, is to study the art, and its possibilities.
3. The pose should always be a restful one, *i.e.*, the position can only be a natural one, provided it is comfortable.
4. Let the oil painting be your guide for strong prints, the aquarelle for soft prints.
5. The lighting arrangements should allow of modification so as to permit every part of the subject to receive proper light values. Our pictures now suffer from a too general lighting.
6. It should be the aim of every operator, in subjects with a smooth background, to obtain transparent shadows similar to the effect gained by translucent varnish on an oil painting.
7. The most natural disposition of the hands is obtained when the hands are employed.
8. The great essential for a portrait is character.
9. The operator should employ every leisure moment in experimental exposures, wherein the pose, lighting, time and development are thoroughly studied, and the comparative relations of the various processes to each other carefully noted.
10. To remove the impression of stiffness in a picture, the disposition of the hands must not be symmetrical.
11. The general public must gradually be led to prefer, in portraits, character to flattery, and natural surface to the smooth, expressionless specimens of the retoucher's art.
12. The operator must spend more time with his client, so that he can the better study his model and his expression.
13. There are practical methods, whereby single parts of a head or picture can be brought out more prominently, by extra sharpness, whereby the attention of the spectator is directed upon

that especial feature, thus making all other parts subjective to the salient feature. Photography in this respect has far greater difficulties to surmount than the painter's art.

14. It is often desirable to combine the characteristic with the genre, so as to give the picture a spirituelle tone.

15. It is absolutely necessary that the operator encourage an animated conversation with his model, so as to lead him above the feeling of "being photographed;" thereby only can a pleasing and intelligent expression be obtained.

VIGNETTING THE SILVER PRINT.

ALTHOUGH in carbon printing, enlarging, and printing by development, the vignette style is practicable, it is in connection with printing-out processes that vignetting is most general, and, indeed, most manageable; as securing that very gradual degradation from the densest shadows to the clear white of the margin—upon which the beauty of the vignette depends. Indeed, the effectiveness of the vignette depends largely upon the fact of the operator being able to open the half door of the frame from time to time, and see the results of his shading operations.

It is seldom satisfactory to use the old style vignetting glass, which consists of a piece of flashed ruby or orange glass, with an irregular patch of the flashing dissolved away by the repeated application of hydrofluoric acid by means of the dabber. For the best work the vignetting mask must be cut out for the special subject in hand, and the material must be such that additions or subtractions can be made during the work. Indeed, some of the best use nothing more than a mask of brown paper, with an opening a little smaller than the subject which it is desired to include, the degree of gradation being determined by the distance of the mask.

Old plate-boxes, or similar boxes of cardboard large enough to take the printing frame, make excellent vignetting devices, an opening in the lid furnishing the required inlet for light. In such

cases it is convenient to set the frame to marks inside the box, and the upper hole may be modified to any extent during the work.

Thin sheet-lead, such as is obtainable at the tin-foil works, is very convenient, as the opening can be readily modified with the fingers, and projecting pieces left either directed outwards or inwards. A black line or mass will often print much farther out than is desirable, and this case can be readily dealt with by turning down a strip of the sheet lead until it nearly touches the glass, the cardboard box being specially useful in instances of this kind, as all pieces loosely arranged upon it can be retained in position for the next print, and the sheet lead has the advantage of not readily blowing away.

Speaking generally, a small aperture at the most considerable working distance will give the most pleasingly graduated vignettes, and still more diffusion may be realized by covering the aperture with tissue paper.

The use of a turn-table, or of a board suspended from a roasting jack, is seldom resorted to, practical workers generally preferring to shift the frames by hand when necessary, and to obtain the gradation by adjusting the distance of the mask.

In referring once more to the use of the sheet lead, we may point out that by turning the edge inwards or outwards we obtain virtually different distances of the aperture for the various boundaries of the subject, a power of importance in other respects than the mere curbing of a black line or mass that tends to run obtrusively beyond the general limits.—*Photographic Work.*

Photographic Bank Notes.—William P. Hazen, Chief of the United States Secret Service, has submitted an interesting report to Secretary Carlisle, in which that officer says: The art of photo-lithography, although seemingly in its infancy, has made it comparatively easy to imitate the most skillfully-engraved designs of our notes, so that the danger from this source is not only very grave, but increasing, and to meet these conditions the designs and execution of Government notes should be such as would make their reproduction most difficult. One safeguard still remaining, however, is the secret process of making distinctive paper.

PRACTICAL TESTING OF LENSES.

UNIVERSALLY important qualities in a lens, such as the absolute light intensity, the utmost transparency of the glass, the brilliant definition, and correct rendering of straight lines on the margins of the picture, are given by all high-class firms, so that a want of these qualities is scarcely to be thought of. But it is different with the special attributes of lenses of large aperture, which are so extremely important to the amateur and professional photographer, and which are so different in the lenses now in commerce. I mean

1. The quality of the definition from the centre to the margin of the picture.
2. The distribution of the depth of focus around the focussing plane.
3. The angular extent of sharp definition when the different stops of the lens are used.

The only method by which satisfactory information on these points can be obtained seems to me to be by systematically carried out photographs of a suitably chosen test object. This test object is a measure of depth of focus; and it demonstrates this over the whole field of view with a single exposure. It consists of a number of so-called focus meters, which—so far as I know—have, up to the present, only been used for testing the chemical focus of lenses. The focus meter is a long thin rod (two metres long), along which, at right angles to its axis, and at equal distances apart, a large number of card wings are fixed. They are spirally arranged, one revolution completing the length of the rod. They are numbered, and covered with suitable printed matter. An odd number of such focus meters, of the same size and appearance, are fixed horizontally across a beam of wood of convenient length, so that the central paper wing is opposite the centre of the beam. They are movable along the beam, and can be turned around their central axis. To make an exposure the test object is arranged as follows: The beam is placed in a plane at right angles to the lens, and horizontal.

The central focus meter is pointed to the centre of the lens, and the focus meters on either side of the central one are turned on their axes so that they all point to the diaphragm. They are arranged along the beam at regular distances, forming angles of 16° , 30° and 41° , with the centre, as seen from the lens. When thus arranged, the central wing of the focus metre, opposite the lens, is focussed, and the exposure made. The printed matter on the wings, and the dots and circles on the beam, will then give a correct means means of judging of the quality of the definition in the different zones of the test field.

—*Photographic Review of Reviews.*

TEMPERATURE OF DARK-ROOM SOLUTIONS.

THIS is a subject about which enough would certainly appear to have been written, but an extra word of warning can never be out of place when winter is beginning, especially as some seem to think that, so long as they never allow developing and other dark-room solutions to get too warm, it does not matter how cold they get—granted, of course, that they do not freeze—or that, at the worst, coldness means only slowness of action. There could be no greater mistake. Coldness of the developing solutions, at any rate, means hard images of inferior gradation even with prolonged exposures. The fixing-bath will probably act fully if time enough be given; but the time becomes so very long with a temperature near the freezing point, that fixation is liable to be incomplete when the photographer thinks he *must* have allowed time enough.

The best temperature for development and fixing, and indeed nearly all photographic operations, is between 60° and 70° Fahr.

Every photographer must know of many make-shift ways of warming his solutions and keeping them nearly at a uniform temperature in the dark room; but there is only one way of accomplishing the object thoroughly, and that, unfortunately, one which is too expensive to be used by any but workers on a

large scale. We refer, of course, to keeping the dark room itself warm, so that all stock solutions, and any water which is to be used for mixing developers—which should not be drawn from the tap, but should be taken from a vessel placed on a shelf in the dark room—as well as fixing bath, etc., may have a nearly uniform temperature. The room should be heated for at least an hour or so before it is to be used for development. It does not matter much what kind of heating arrangement is used, but if it be one that involves combustion within the dark room, it absolutely *must* be provided with means for carrying off the products of combustion, unless the photographer is willing to run the risk of asphyxiation of himself or his assistant. No attention must be paid to statements about gas stoves and the like, to the effect that they “burn” or “consume their own products of combustion.” They do not, and, according to our present state of knowledge, *cannot* do so.—*Photography*.

THE MERITS AND DEMERITS OF THE COMBINED TONING AND FIXING BATH.*

By J. H. BALDOCK, F. C. S.

A SOMEWHAT voluminous correspondence on the above subject was carried on about the middle of the present year in the columns of the *British Journal of Photography*, which was disappointing in so far that it failed to elicit any reply on behalf of the manufacturers of gelatino-chloride papers, as to *why* some of them recommended, and some did not, the employment of the combined bath. The following experiments, and the deductions we draw from them, we lay before the members of the society this evening, more in the hope of eliciting useful discussion and practical research than in settling what is necessarily a complex question.

The three principal indictments brought against the process are: (1) Yellowing of the whites, (2) double toning, (3) fading;

* Read at the Croydon Microscopical Society.

and we have no hesitation in saying that all these charges may, under certain circumstances, be substantiated. The question arises, therefore, What are the circumstances? We have here several pieces of paper (gelatino-chloride) of different makes, some of which have been immersed in combined bath for fifteen minutes, washed very thoroughly (Wood's washer) for two hours, and then a weak solution of ammonium sulphide painted over half the paper; a deep brown stain resulted, though some of the papers were darker than others. Some more pieces were next soaked in a dilute solution of lead acetate (1 gr. to the ounce) for fifteen minutes, well rinsed, and then soaked in freshly made fifteen per cent. hypo for fifteen minutes, and thoroughly washed as before, painting half these over with the sulphide; a brown color, differing hardly from that before obtained, was manifest. Another piece of paper was soaked in fifteen per cent. hypo for one and a half hours, and then well washed for four hours; on painting this a very feeble discoloration was observed. Yet another piece of paper was soaked first in fifteen per cent. hypo for one and a half hours, and then in ten per cent. ammonia for half an hour, and finally washed for four hours; in this case only the very slightest tinge of brown was noticeable. Lastly a piece was soaked in twenty per cent. hypo strongly ammoniated for half an hour, and washed for twelve hours; in this case the sulphide produced no effect whatever, the paper remaining perfectly white. Having now succeeded in producing a paper insensitive to sulphide, and consequently free from silver, we took some of this specially-prepared paper and soaked some of it in the combined bath in which the gold was omitted, and some in the dilute solution of lead acetate—lead being, of course, the only metal present in both cases—for fifteen minutes (the average time taken for toning), and then washing for six hours; in each case the ammonium sulphide produced a deep brown stain, and what is more to the point, the paper itself was stained, if anything, deeper than the gelatine surface!

We also examined some of the black metallic-looking deposit which is always formed on the bottles in which the combined bath is kept—and the more the bath has been used, the greater

the quantity of this black deposit—with the result that a large quantity of silver and an appreciable quantity of lead existing as sulphides were found. The question has often been asked, but, as far as we are aware, never answered, why lead is used in these combined baths at all, especially seeing that it apparently serves no useful purpose.

The deductions to be drawn from the above observations are that the combined bath, particularly if it contains, as is usually the case, lead and alum, is at all times a risky thing to use for at least three obvious reasons: (1) Toning may be complete before fixation, and thus silver left in the print; (2) the elements of sulphur toning are always present; (3) the difficulty of removing the last traces of lead. If a combined bath must needs be used, we strongly suggest that it should contain nothing but hypo and gold, with or without ammonium sulphocyanide, and that on *no account* should it be worked to death—use as much of it as is necessary to tone the prints in hand, and then throw it away.

As it may be said that the combined bath is suited to some papers and not to others, we may state that our experiments were conducted with four of the leading papers on the market, and that they all give practically the same result. In conclusion, we would ask whether the time saved in the preliminary washing and toning before fixation, which is permissible with the combined bath, is sufficient to set against the almost certain risks we have pointed out; and we would further ask those who can *give proof from experience* and not merely theory, to publish their results.—*The Amateur Photographer*.

Young Man, This is for You.—Save a part of your weekly earnings, even if it be no more than a quarter of a dollar, and put your savings monthly into a savings bank. Buy nothing until you can pay for it, and buy nothing you do not need. A young man who has grit enough to follow these rules will have taken the first step upward to success in business. He may be compelled to wear a coat a year longer, even if it is unfashionable; he may have to live in a less fashionable quarter; but the result, if followed and figured at the end of one year, will show wonderful results.

AN EXHIBITION OF PHOTO-MECHANICAL PRINTS.

THE true mission of a photographic society should be to aid and foster the interests of the various branches of the heliographic art in all of its wide-spread ramifications.

Among the chief duties of a well-organized alive society are to be found the development of new methods, and report upon their utility and value in practice, the comparison of results, by specimens from various quarters at home and abroad, and bring the photographic processes and results before the general public, and lastly, but not the least duty, is to bring together, wherever possible, the promoters or advocates of the different processes, and by sagacious management, equalize conflicting and opposing interests, and thereby bring about an era of good fellowship and intercourse between the workers in the many different enterprises which are now either wholly or partially dependent upon the sensitive plate and camera for their products.

That the management of "The Society of Amateur Photographers of New York," are of our opinion is shown by the late exhibition of photo-mechanical prints and printing processes, which was organized and held at the society's rooms, 115 West 38th street, New York City, from December 3d to 15th inclusive.

This exhibition consisted of about 500 specimens of photo-mechanical work ranging all the way from the crudest "direct zinc" for newspaper work, to the beautiful photo-chromotype by Edwards, Kurtz and Bierstadt. This exhibition was, without a doubt, the most successful collection of process prints ever shown as a whole, in either Europe or America.

The total number of exhibitors numbered 31—divided as follows: New York city, 13; Philadelphia, 1; St. Louis, 1; London, 7; Scotland, 2; Munich, 2; Australia, 2; France, Prague, Austria 1 each.

To single out the best exhibits, would be a somewhat difficult task; a prominent feature, however, even to the untrained eye was the great superiority of American half-tone and color work over the foreign products. The fact was the more unaccountable as it

AMERICAN JOURNAL OF PHOTOGRAPH,
JANUARY, 1895.



PROFESSIONAL FLASH-LIGHT PORTRAITURE.

MADE WITH THE McCOLLIN PROFESSIONAL FLASH-LAMP.

NEGATIVE, 20 X 24, BY ELMER CHICKERING, BOSTON, MASS.

was understood that one of the leading exhibitors had a well-known American expert in his establishment for a year or more, to familiarize them with the American procedure of etching half-tones on hard rolled copper.

The greatest surprise, however, was to see the perfection to which the three above-named establishments in New York City, had brought the so-called "three-color" printing process.

From the specimens exhibited, it is evident that some very important strides have been made in the process within the past year, and that the process, which is even now described as chemical by parties who should know better, is at least in some quarters an established success, and is worked commercially at a profit.

One had but to examine the frame shown by the New York Photogravure Company, containing a piece of oil cloth, then a printing in yellow, red and blue, showing the process, and finally a print where the three colors were superimposed; there was the original side by side with the reproduction, which exemplified the truthness of color to nature.

Another exhibit by the same firm showed specimens of rugs and Axminster Carpets.

On the opposite side of the room was a large frame containing reproductions in color of similar subjects, both Smyrna and Japanese, by E. Berstadt. The utility of these specimen prints becomes apparent when it is taken into consideration that where travelling salesmen in this line formerly were forced to carry a number of trunks with samples, they now carry a neat sample book of photo-mechanical chromograms. Another frame by Berstadt contains reproduction of book bindings, one of these was perhaps the most faithful ever exhibited.

The Wm. Kurtz Company showed a number of fine "chromograms," from colored drawings, nature and pictures. Some of the specimens were artistically and typographically perfect, showing that the greatest mechanical difficulties had been overcome and that commercial success was assured.

The finest monochrome half-tone ever placed on exhibition, was shown by the National Chemigraph Company of St. Louis.

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Another exhibit by the same firm showed specimens of rugs and Axminster Carpets.

On the opposite side of the room was a large frame containing reproductions in color of similar subjects, both Smyrna and Japanese, by E. Bierstadt. The utility of these specimen prints becomes apparent when it is taken into consideration that where travelling salesmen in this line formerly were forced to carry a number of trunks with samples, they now carry a neat sample book of photo-mechanical chromograms. Another frame by Bierstadt contains reproduction of book bindings, one of these was perhaps the most faithful ever exhibited.

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Mo.; they were printed from relief plates, and exemplified the perfection to which this class of photo-mechanical work has been brought, and what can be done by careful and intelligent press work.

In regular photogravure work, *i.e.* intaglio copper-plates, fine specimens were shown by several foreign exhibitors. The specimens of the New York Company, however, showed that the home company had little to fear from foreign competition so far as the quality of the work was concerned.

It is to be regretted that Philadelphia's photo-mechanical establishments were not represented at the exhibition. The F. Gutekunst Company, with a few phototypes and half-tones, was all to remind the visitors of the Quaker City, which is renowned for its many photo-engraving establishments and the excellence of their outfit.

The Society of Amateur Photographers of New York deserves great credit for the late exhibition. The officers and promoters of the enterprise must of necessity have gone to trouble and expense to bring about the successful termination of their labor.

Three lectures and demonstrations were given during the exhibition by F. E. Ives, on "Composite Heliography," Mr. Ernest Edwards on "Photo-Mechanical Printing," Prof. Chandler, "Photo-Mechanical Printing Processes."

An elaborate catalogue was also issued by the Society, leading features of which are a fine photo-chromotype, "The Burgomaster's Daughter," by the New York Photogravure Company, together with a preface on "photo-mechanical printing processes," by Mr. Walter E. Woodbury. It is printed on the "Knickerbocker Press," and does credit to all concerned.

Mrs. Hicks : The artist took this photograph by the instantaneous process. Hicks : I should have known that without telling. Mrs. Hicks : How? Hicks : Your mouth is shut.

The loud-ticking clock is not always the best time keeper.
Castles in the air never bring in any rents.

TRADE RIVALRIES.

OUR sprightly English contemporary, the *Optician*, in a late issue, informs its readers that it is really but a very few years since the introduction of modern dry plates—*i.e.* cheap dry plates—brought our friends, the amateur photographers, into vigorous and omnipresent activity. And it is to these modern dry plates that opticians are chiefly indebted for the most rapidly expansive, and almost the most interesting development of their skilled industry. Considering the fascination which photography exercises even upon obtuse, unscientific minds, one cannot wonder that the more intelligent among mere tradesmen have somewhat concerned themselves with meddling in this new scientific, yet popularly attractive branch of commerce, which opticians have rightfully annexed. Let it be understood that we are talking here of the sale of materials to those up-to-date pressers of buttons with whom it is convenient to class the majority of amateur photographers. The few purchasers of highly expensive lenses, of complex apparatus, and of comparatively rare chemicals, may be pretty safely relied upon to give their custom to a regular photographic dealer. But simple hand-camerists, innocent of the effects that may spring from *staleness* in sensitized papers, etc., often overlook the benefits of dealing where they should. The price being satisfactory, such a photographer as we speak of would be quite content to buy a packet of films, when required, just as he would buy a bottle of patent medicine or a box of pills—from the family grocer. We may lament such a monstrous abuse as the competition of grocers, drapers, and other ignorant tradesmen in the sale of photographic goods. But of course there is only one remedy which it is permissible to apply—that of moral suasion, brought to bear in every possible way on those benighted amateurs whose purchases are made in an irregular manner. The virtues of freshness in photographic goods, such as they are, should be placarded in the optician's window. And indeed, when requisite, such virtues may be discovered for the occasion. The indicated course is, perhaps, not commercially

immoral. For the end in view, to accentuate the benefits of patronizing a regularly established dealer, is certainly a good one. Speaking of the optician's window, we think that some space in it should be given to photographic literature. Once whet the amateur appetite for scientific knowledge, and there is no knowing with what weight it may not affect the instrument dealer's till. There is nothing which serves better than some slight knowledge of the *science* of photography to invest an optician's emporium with that mysterious attractiveness which it ought to possess for the lay mind. In this work of teaching the young idea how to snap-shoot with intelligence, good service is rendered by some of the photographer's journals. There are, as we all know, some very ably edited journals devoted to the interests of photographers. It is to be regretted that, in *some* few cases, the literary objects of such publications are rather badly served, and that admission is even given to a mass of petty advertisements having for their object, apparently, to substitute the parcels post for the counter in making retail sales. We think, however, that these things will right themselves in time. We do not believe that legitimate trade can be very seriously or permanently injured by the miserable shifts of would-be tradesmen without shops. The pig-in-a-poke system of buying instruments or materials, without inspection, and from strangers, will die out just in proportion to the energy with which photographic opticians of good standing devote themselves to exposing the abject silliness of that practice. For the rest, we flatter ourselves that manufacturers and wholesalers are, sometimes slowly but none the less surely, adopting modified ideas as to what is, from the retailer's point of view, a fair use, and what an abuse, of the advertising facilities which amateur-photographic journalists are so anxious to press on their attention. It is becoming better appreciated that the established retail dealer is the "factor" of main importance in extending the optical and photographic trade. His interests demand every possible sort of consideration from the wholesale merchant.

THE METRIC SYSTEM.

IN reply to a deputation in favor of introducing the decimal system into common use in British trade transactions affecting money, weights, and measures, Sir William Harcourt, the Chancellor of the Exchequer, made use of the following argument:—

This is a practical question, and the Government have to consider what are the sentiments, what are the habits, and what are the convictions of the great mass of the people of the country. If you introduce a decimal system into the coinage of this country you must alter either the value of the pound or the value of the penny. Is the commercial community prepared to alter the value of the pound sterling in England? The pound sterling is the fixed star of that commercial system, and I think he would be a very rash man who proposed to alter the value of the pound sterling. I doubt very much whether he would receive any support from the commercial interests of the country. Some gentlemen spoke of the shilling being the unit with which the poor man has to deal. That is not so. The unit with which the poor man has to deal is the penny, and that does not lend itself to the decimal system. You must alter, therefore, the value of the penny. If you do not alter the value of the pound you will alter the value of the penny to four per cent. if that is the figure given. Let us see what will be the effect upon the mass of the people of this country of making a change in the value of a penny. Consider what part the penny plays in the life of the great mass of the people of this country. It governs everything that they have to do with. The penny measures meat, sugar, a glass of ale, a pot of beer—in fact, every single thing with which they have to do. It measures more than that—it measures almost all the railway rates, which are a penny per ton per mile, or whatever the rate may be. If you alter the value of the penny you must alter the value and price of every commodity with which the ordinary man deals.

To most Americans such an argument will seem rather forced. Suppose that instead of making the penny equal 1-240 of a pound, its value be decreased so as to make 250 equal a pound sterling, or, in other words, that 500 half-pennies equal the same amount. It seems absurd to say that any general trade paralysis would follow if 50 "ha'pennies" should be made equal to half a

crown, and 100 should equal a crown, just as in American money 50 "pennies" make 50 cents, and 100 make a dollar. If necessary, new coins, struck off in honor of Victoria's famous reign of more than fifty years, could be substituted for pennies and half-pence. The fluctuation of the markets make as much change in a "penny's worth" of the general staples of daily use as would follow the introduction of the new system, and yet those fluctuations do not threaten to paralyse trade, and the time saved in computation alone would probably be worth far more from a merely financial standpoint than any amount that might be lost by the reform.

Indeed, it is a matter of some wonder that Americans, who surely know by experience the great benefits resulting from a decimal system of coinage, do not push the same system into weights and measures. The metric system has been made a legal one in the United States, and yet has not been adopted as it ought to be. The use of pints and quarts, inches and feet, ounces and pounds, is to be regretted for many reasons, not only because weeks of study are necessary to the mastery of the different tables, but because an adoption of the metric system might result in real benefit to the nation in foreign trade. The use of the metric tables in science has proved such a complete boon that no amount of persuasion or argument could induce American scientists to return to the complex "English" system of weights and measures.

In the same way the South American and Continental European countries will never give up their metric system. Trade with those countries will be transacted for the most part in decimal weights and measures. Those who sell to South American merchants in any general trade of small lots, must do so according to the existing metric system now so widely in use in Spanish America. The duties are levied by kilos, not by pounds or yards. If, as all Americans hope, the United States is to become the chief commercial source of supply for the Spanish American countries, trade might be very much simplified if both countries were familiar by daily use with the same system.

As to the means to be employed, the Government could ac-

compish much by ordering that all Government transactions be conducted on the decimal system, and especially that advertisements for bids should be issued and all purchases or contracts made under such a system. In that way alone the metric weights and measures would be widely used in this country, and once used they are not likely to be discarded for the older and more cumbersome methods of calculation. If all surveys, all contracts for public work, were to be made by the Government under the metric system, it is not impossible that in a few years the reform would extend to all branches of trade. If the United States were to adopt the system, England might soon follow.

Hints from Seed's Manual.—Do not attempt to clean the surface of a dry plate by drawing it across the coat sleeve or rubbing with the hand, but in all cases remove any dust with a camel hair brush.

If you have failures, do not condemn our plates. Inform us by mail, and we will try and help you out of difficulties.

Do not hurry your negative out of the Hypo bath; it will save you trouble later on.

Drain the Hypo from your plate before putting into wash; it will help to prevent softening.

Do not develop your plates too close to your developing lamp; you may fog them.

In summer, keep your developer cool, and note the clean, clear results.

In winter, keep your developer between 65° and 70°. Use a liquid thermometer for this purpose—it will pay.

Keep your stock of Dry Plates in a dry, cool room—not hot.

Do not dry your negatives in a room having a close atmosphere, but give them a little draft.

Much of the interest which must be felt popularly in modern science is lost by the unattractive form in which the material is presented. *The New Science Review* proposes to explain before demonstrating, and will not assume that the reader has a special acquaintance with the subject considered.

THE LIFE OF OUR PRESENT LITERATURE.

AS far back as May, 1892, we called attention to the worthless character of the paper stock, so far as permanency is concerned, that is now used for both photographic as well as printing purposes.

In February, 1893, we supplemented above article by another on "The Adulteration of Paper Stock:" in the latter paper we set forth how even the wood-pulp was loaded and adulterated with talc and other mineral substances.

This subject has of late been taken up by noted bibliophiles in Europe as well as in America. The last noted celebrity to write upon the subject is M. Delisle, librarian of the Bibliotheque Nationale of France, who calls attention to the fact that paper is now made of such inferior materials that it will soon rot, and very few of the books now published have chance of a long life. The books of the present day will all have fallen to pieces before the middle of next century. The genuine linen rag paper was really calculated to last, and even the oldest books printed on it, if kept with due care, show very little of the effect of time; but the wood pulp paper now largely used, in the making of which powerful acids have been employed, is so flimsy that the very ink corrodes it, and time alone, with the most careful handling, will bring on rapid decay.

Perhaps from one point of view this is not altogether an unalloyed misfortune. Only remnants of present day literature will survive for the information of future generations, and great national collections, such as that in the British Museum library, formed at great expense, and intended to be complete and permanent, will offer to the literary historian of, say, the twenty-first century, but a heterogeneous mass of rubbish, physical laws thus consigning to oblivion a literature of which but a tithe is intellectually worthy to survive.

The papermaker thus unwittingly assumes the function of the great literary censor of the age. His criticism is mainly destructive, and it is too severe. Without the power of selective appreciation, he condemns to destruction good and bad alike.

PHOTO-MECHANICAL PRINTING PROCESSES. *

BY WALTER E. WOODBURY.

THE term "photo-mechanical" is applied to all processes in which, by the combined action of light and chemical substances, printing surfaces are prepared from which a number of impressions can be taken by purely mechanical means.

About the year 1813 Nicephore Niepce commenced a series of experiments which resulted in the discovery, some fourteen years later, that bitumen, under certain conditions, become insoluble when exposed to the action of light. He coated metal plates with a solution of this substance and exposed them to the image in the camera or beneath a drawing on translucent paper. Those portions acted upon by light became insoluble while the remaining parts were dissolved away with oil of lavender. By this means a reversed picture in bitumen was obtained on the metal plates. By next applying an etching acid the parts of the metal unprotected by the bitumen image were corroded into the surface, and after clearing away the image a printing plate was obtained.

In 1838 Mungo Ponton discovered that gelatine and other organic substances, if treated with dichromate, became sensitive to light, becoming insoluble in those parts exposed, in the same manner as the bitumen. Later on (1853) Fox Talbot discovered another important property possessed by gelatine. If a bichromated film of this substance be dried at a moderate temperature and exposed to light beneath a negative, it could, when washed and dried, be treated in the same manner as a lithographic stone; that is to say, it would absorb water and refuse greasy ink in some parts, while in others it would refuse water and take up the ink.

It may be said that upon these three important discoveries all photo-mechanical printing processes are based. We can arrange them into two distinct classes :

* Preface to Catalogue of the Exhibition of Photo-Mechanical Prints and Printing Processes, held by The Society of Amateur Photographers of New York, December 3d to 15th, 1894.

A. Those in which the picture is moulded in pigmented gelatine.

B. Those in which the picture is printed in ordinary printing-ink.

To the first class belong but three processes, which except in a few minor details are practically the same. They are the inventions of the late Walter B. Woodbury, and termed Woodburytype, Woodbury-gravure, Stannotype.

The second class contains a large variety of processes, including those printed from gelatine surfaces, from stone, from intaglio metal plates, and from metal plates in relief.

We will give an outline sketch of the various photo-mechanical processes as now worked.

Woodburytype was the invention of the late W. B. Woodbury. In this a glass plate is coated with collodion and then with dichromatized gelatine. This is exposed under a negative and afterwards washed in warm water, which removes the soluble parts, leaving the image in relief. When the gelatine relief is dry it is exceedingly hard, and is stripped from the glass support and pressed into a sheet of lead by hydraulic pressure. By this means an intaglio mould is formed. This is placed in a specially constructed press having a heavy and perfectly true lid. A little warm gelatine solution containing any desired pigment is poured on to the intaglio mould previously greased; a piece of prepared paper laid on the top and the heavy lid brought down and clamped firmly. This squeezes out the excess of colored gelatine, only allowing that to remain which lies in the depressions of the mould, which sets and at the same time adheres to the paper support. The paper when removed has in this manner a gelatine image attached to it, which is dried and hardened with chrome alum. If glass be employed instead of paper very beautiful transparencies or lantern slides can be made.

It will thus be seen that the resulting picture consists of varying thicknesses of pigmented gelatine, the tone or gradation depending upon the thickness.

The Stannotype Process is a modification of the Woodburytype by the same inventor. A negative relief is made, or the re-

verse of that used in the latter process, and developed upon a glass plate. When dry it is coated with a thin solution of india-rubber and a piece of tinfoil laid over it. The whole is passed through rubber coated rollers which presses the thin sheet of tin well into the relief where it firmly adheres owing to the india-rubber solution.

Here we have, to all intents and purposes, a printing mould the same as obtained by pressing a positive relief into a lead plate, and the printing is done in the same manner. The object of the process was to reduce the cost of the necessary materials for the Woodburytype by dispensing with the hydraulic press.

Woodburygravure. For some time the chief drawback to the use of Woodburytype prints for book illustrations was the necessity for trimming and mounting each picture. By a process, discovered quite recently, it was found possible to mask the unsightly outside edge of each print and transfer the picture image from one support to another. It will be noticed in the Woodburygravure print that the surface is of a duller nature, more like a photogravure. This is due to the fact that the surface we see was previously the under part in contact with the first paper support.

The Photo-Filigrane Process consisted in passing through a rolling press a gelatine relief and a sheet of heavy opaque white paper. Certain portions of the paper are, by the pressure, rendered more transparent than others, and a photographic image resembling a watermark can thus be obtained in the body of the paper.

Collotype or Albertype Process. This process was devised by J. Albert, of Munich, in 1869, and is worked under a variety of fancy names.

A sheet of thick plate glass ground perfectly true is first coated with a film of albumen and gelatine to which a bichromate has been added. This is then laid on a piece of black cloth and exposed to light, washed and dried. The plate is again coated with a dechromatized gelatine, or isinglass, and dried in a chamber heated to about 120°F. It is then exposed under a negative, soaked in water to remove all chromium salt, hardened with alum

and finally dried. By this means a scarcely visible image in gelatine is the result, those parts which have been exposed to the light being insoluble and repellent for water, the remainder retaining their absorbent properties. The plate is fastened with plaster to the bed of an ordinary lithographic press, the printing being very similar. A wet sponge soaked in glycerine and water is used to moisten the absorbing parts of the gelatine (the whites of the picture) and an ink roller inks the image part. A paper mask is fitted over and a sheet of paper laid on it and after pressure is applied, the ink is transferred to the paper. Prints may also be made upon cotton and silk fabrics.

Artotype process is but a modification (by Obernetter) of Albert's process. Instead of first coating with a chromated gelatine substratum and rendering insoluble to light, as a foundation he uses a mixture of silicate of soda and albumen or stale beer. By this means metal may be used in the place of glass as the support.

Heliotype is another modification of the collotype process by Ernest Edwards, the principal feature being that the gelatine film is hardened with chrome alum and afterwards detached from the support upon which it is first prepared. It thus forms a tough and flexible skin which can be used at any time for printing from by attaching to a zinc plate or to a cylinder.

Indotint Process. Still another modification of the collotype process (by J. C. Roche). In this a copper plate is roughened by means of a sandblast, which causes the sensitive film to adhere closely. This is employed in the place of the glass plate.

Collotype Enamel Prints which have a very close resemblance to an ordinary silver print are produced by employing a photo-brown ink, printing upon a tinted enamel paper, and afterwards varnishing with a shellac water varnish.

(To be continued).

Truth is the most exacting and imperative thing in the universe. Nevertheless by it alone are men made free through obedience.

HINTS FOR THE REPRODUCTION OF OIL PAINTINGS.

DR. ADOLPH MIETHE gives the following practical hints for the reproduction of oil paintings and other colored originals. In view of the increased demand upon professional photographers for the reproduction of such subjects, the advice is timely and appropriate.

Whenever an oil painting is to be photographed, the first question is whether it is old or new, and if it needs restoration or refreshing. If the subject is very old and valuable and shows cracks, let the photographer abstain from any attempt at restoration. But where it is absolutely requisite that it should be done, send for a practical picture restorer, and bring him in contact with the client; this will remove all responsibility from the photographer.

If the painting is in a good condition, the photographer may safely apply the following refreshing process. To the white of one chicken egg, add 500 ccm. of distilled water, after being well shaken add 200 ccm. alcohol; after being well incorporated by shaking, filter.

Wipe the painting off with a moist cloth, and while yet damp coat slightly with above solution, either by rubbing it on with a piece of absorbent cotton or by use of a sprayer or atomizer. The colors of the original will then appear in their original freshness.

After the painting has been thus cleaned or refreshed, the chief difficulty to success has been removed. It now depends whether the effect of the original is of the Rembrandt or Plein-air order; if the former, the use of a color screen is unnecessary, as the sensitizing of an ordinary dry plate will suffice.

For a free light effect, however, both screen and sensitized plate are requisite. A color screen can be made by flowing a piece of plate glass the size of the negative wanted with a solution of aurantia and plain collodion.

To sensitize the plates, prepare a stock solution of

Eosine (yellowish)	. . . . .	0.1 gram
Alcohol (96 per cent.)	. . . . .	500 ccm.
Picric acid	. . . . .	2 g.
Water distilled	. . . . .	20 ccm.
Bichromate of potash	. . . . .	9 g.
Water distilled	. . . . .	90 ccm.

The eosine is dissolved in the alcohol and set aside, then dissolve the picric acid in water and heat to 30 R. In the meantime dissolve the bichromate in the water and add slowly to the picric acid, then filter. This sediment after repeated washings is to be dissolved in

Sulphate of quinine	. . . . .	5 g.
Alcohol	. . . . .	200 ccm.

The quinine is gradually dissolved in a small quantity of alcohol by warmth, the 200 ccm. are then to be added. In a graduate add 500 ccm. distilled water to 5 ccm. of above stock solution, then add 5 ccm. of the eosine solution. Of this solution pour 200 ccm. in an 8 x 10 tray and immerse in it an ordinary dry plate for about two to three minutes. The sensitized plate is then drained on a piece of blotter, and dried at a normal temperature.

It is absolutely necessary that these manipulations must be done in a dim ruby light, and the plate dried in absolute darkness.

Plates thus treated are even more sensitive than the commercial isochromatic plates. They repress the blue rays and reproduce yellows and reds in their true values.

Focussing is first done as usual, then the color screen is substituted for the ground glass and a careful focus again taken; for the exposure one of the smallest stops should be selected.

The color screen is placed at a distance of not over 2 ccm. in front of the sensitive plate. [For a focal-plane color-screen a special plate-holder is requisite.—Ed.]

As to the best developer, the learned writer advises operators to use the developer they use in their ordinary practice.

Chromo-lithographs are best copied by the wet collodion process, as they require neither color screen nor orthochromatic plates. Good collodion and a clean acid silver bath are in this case the chief requisites.

For water colors, the color screen will have to be denser than for oil paintings.

THE TRIALS OF A PHOTOGRAPHER.

IT was in a town of somewhat less than 10,000 inhabitants in the vicinity of the Quaker City. The time was about two weeks before Christmas. The day broke bright and clear. Naturally, Mr. Napoleon Bonaparte Smith, the leading photographer of Biddleville, hurried to his gallery to take advantage of the clear December day. Visions of wealth came up before him as he hastened on with gayer step. The time until Christmas was ample for all orders that might come in during the days. Then again there was some chance to catch up in the printing, that had been so sadly delayed from day to day during the dark and cloudy spell that preceded the ideal December day.

But as the old saying goes "Man proposes," and cruel fate,—well, often orders the opposite. Thus our subject was doomed to experience. Arriving at the studio he found that the spirit that had animated him had not had the same effect upon his assistant, whose duty it was to "open up;" the fire had not been started, the rooms had not been "cleaned up," nor had the show case at the door been brightened and made to look attractive.

It was nearing 10 o'clock, and the "reception lady" had not yet arrived, and when she did come, she looked anything but bright and cheery for business. A protracted church sociable was the excuse, and being near Christmas the proprietor had to be satisfied.

However, by the time the clock struck ten, all were ready for the Christmas rush, but no sitters had as yet come up the narrow flight of stairs to be "took." The studio and camera had been dusted, the levers wiped up, the "scenic" straightened up, and

the nearest posing chair placed temptingly between camera and background. The best specimen cabinets were spread out in the show case, and the two newest baby charmers placed handy for action.

In the dark room equal preparations were made for business. An extra quantity of developer was mixed up, fresh hypo put in the fixing trays, and the assistant set to printing up back orders.

Almost before these many preparations were completed the studio door opened, and in walked a richly-dressed young woman, the daughter of one of the leading citizens of Biddleville.

The proprietor, knowing his customer, and scenting a good order, advanced to meet the lady; what took place happened something in this style: "Good morning, Miss Oldstock." "Mr. Smith, I have come to see what you would charge me for a dozen cabinets; I suppose you do them as cheaply as I can get them in the city?" "My price for the best chloro-gelatine solaristotypes is three dollars per dozen." "Oh my! isn't that dear." "No, Miss, not for our work. To commence with, we make our negatives on genuine anti-halation, double-coated, ortho films, fix 'em in pure doubled-distilled American hypo, then retouch them with genuine French "dope," until the skin is as smooth as velvet, and our prints are not to be beat by any one in Philadelfy." "Well, Mr. Smith, I suppose if I order a dozen you will make some looking sideways, and some full face; then I would like to have one or two with my back turned, and looking over my shoulder, like one you have in the show case at the door."

When this speech was done the luckless photographer drew a long breath, and would have liked to say something, but as the lady belonged to one of the leading families, who were friends of the Nucombs and Spotcashes, both good customers, it would not have been policy to offend her; further, a duplicate or two of her in the show-case at the door would have been a drawing card.

So under the circumstances the photographer put on a bland smile and said, "Certainly, Miss Oldstock; it will afford me great pleasure to pose you in several positions. When will it suit you for me to make the sitting?"

By this time there were several customers waiting who had secured their "turn" from the reception lady at the desk, but it would not have been policy to give any ordinary every-day customers the preference over Miss Oldstock.

She answered the question as to the sitting with a query:

"How much did you say you charged for a dozen, Mr. Smith." "Three dollars, Miss —." "Oh my, but aint you dear," "No, Miss, not for the artistic work we turn out." "Why, our George takes pictures, and he was telling us only last night how cheaply they were made. He belongs to the Turkeytown Hypo Club, and he gets things as cheap as you do from the dealers, because he talks up things when the club meets. He told us all the plates cost was a few cents apiece, and he gets fifty off, whatever that means. Then the club finds the chemicals, and he can make a hundred pictures from one plate."

"Excuse me, Miss," broke in the photographer, "but I am very busy to-day, and if you wish a sitting I must know the time, as I would make specially soft plates for you, and there are people waiting for me." "Well, really, I don't know; I didn't intend to have any taken to-day. I only wanted to know what you charged."

The artist now thoroughly demoralized, said, "Well, Miss, any time you make up your mind I will be pleased to wait on you. Good morning." "Oh, excuse me, Mr. Smith I almost forgot what I really came for. I wanted to ask if our George took my pictures, what you would charge to print half-a-dozen."

The hapless artist, with a longing glance towards the waiting visitors, blandly said, "They would cost you five dollars a dozen Miss, when we do not make the negatives."

"Oh my! why that is forty-two cents apiece. Why George told me you ought to print them and paste them on gold beveled mounts at five cents apiece when the negative is furnished. George said that you photographers buy what he calls cabinet seconds, and he gets them at fifty-cents for a whole gross, and that the cards don't cost a cent apiece. You see our George belongs to the Turkeytown Hypo Club, and he learns all about what things cost at the meeting."

What could the now thoroughly disgusted photographer say or do. To give vent to his feelings would have been to imperil some of his best families who were friends of the Oldstocks. He took the best course, viz., he politely bowed his fair customer out, telling her that it would afford him the greatest pleasure to wait upon her at any time—after Christmas.

That is what he said:—what he thought,—well, that is another matter, that we do not care to print.

It was now almost noon and the best part of the day was lost, and the only actual business that had been done was a number of sittings for tin-types at the rate of ten for twenty-five cents, and each put up in an ornamental envelope. This branch of the gallery was in charge of the assistant, who divided his time between the tin-type and printing department.

The first actual sitter, or rather squirmer, was an infant, brought by its loving mother and doting grandmother. It was over an hour before the party were through. Six plates had been exposed on the little wriggler, valuable time wasted, and no definite order would be given until grandma saw the proofs that were to be sent.

For the next hour matters went along a little better. Negatives were made of several sitters, while the tintype mill was kept running, a number of young people from the outlying country district furnishing the material. It is true that a dozen or two of prints that were out were overprinted and spoiled while the assistant was busy with the ferrotype mill, but such little accidents don't count in a country studio, when the operating room is busy.

The capping climax of the day was yet to come. It was well towards two o'clock, the rays of the sun were lengthening perceptibly, when the business prospects brightened. A lady entered and wanted to know whether Mr. Smith could make a life-size portrait of her husband by Christmas, from a negative made some time ago. It was to be worked up in pastel and framed. The price agreed upon was the round sum of fifty dollars. To fill this order in time the enlargement would have to be in the artist's hands on the following day at the latest.

The proprietor, immediately on the departure of his customer, went into his enlarging room, and made all preparations for tacking up his last sheet of 20x24 Bromide on the copying rack. Fresh developer was mixed up, and every care taken to get the head fair in the centre and the focus good and sharp. Just as all was ready and the exposure about completed, the door was suddenly opened and a flood of white light let in upon the exposed sheet. A rollicking fellow, with grip in hand, before he could see the havoc he had created, blurted out, "Hello! how are you, Smith, old fellow, how's biz.? Can I take your order for a case or two of Foggemup's new silver film plate, you'll want 'em fer Christmas?"

It was merely an everyday drummer from a stock house on his rounds.

As for Smith, his last chance for the fifty-dollar enlargement had vanished. The real cause of the trouble was that he had forgotten to bolt the door of the enlarging room. However, this was not considered.

We will pass over what happened during the next few minutes. But when the genial drummer pulled himself together at the bottom of the staircase and there stooped to gather up the contents of his grip that had been thrown out after him by the irate photographer, he muttered, "I wonder what's the matter with Smith, anyway; he must agot crazy. Guess I won't go back to talk flash-light machine to him till to-morrow.

The photographer, now thoroughly disheartened, without stopping to pick up the camera stands and head rests that had been overturned, or even taking a glance at his best scenic background that some one evidently had "gone through" bodily, said to his assistant, "Bill, I guess we better call it a day, call it a day. We aint made much money to-day, but I guess that infernal drummer will want some arnica and liniment before the morning. Let's get down soon in the morning, we may have better luck to-morrow.

J. FOCUS SNAPPSCHOTTE.

A Truism.—Give a lie one day's start and it will take truth years to overtake and stop it.

THE PORTRAIT OF A PUBLIC MAN IS PUBLIC PROPERTY.

IN the United States Circuit Court, Boston, Judge Coit presiding, a suit was brought by the widow and children of George H. Corliss, the inventor and builder of the Corliss engine, to enjoin the defendants from publishing and selling a biographical sketch of Mr. Corliss, and from printing and selling his picture in connection therewith. The bill did not allege that the publication contained anything scandalous, libellous, or false, or that it affected any right of property, but the relief prayed for was put on the novel ground that the publication is an injury to the feelings of the plaintiffs and against their express prohibition.

In August, 1893, Judge Coit decided that the plaintiffs had no right to an injunction preventing the publication of the biographical sketch, and the present decision is on the photograph alone. The Court now says, in part :—

“ While the right of a private individual to prohibit the reproduction of his picture or photograph should be recognized and enforced, this right may be surrendered or dedicated to the public by the act of the individual, just the same as a private manuscript, book, or painting becomes (when not protected by copy-right) public property by the act of publication. The distinction in the case of a picture or photograph lies, it seems to me, between public and private characters. A private individual should be protected against the publication of any portraiture of himself, but where an individual becomes a public character the case is different. A statesman, author, artist, or inventor who asks for and desires public recognition may be said to have surrendered this right to the public. When anyone obtains a picture or photograph of such a person, and there is no breach of contract or violation of confidence in the method by which it was obtained, he has a right to reproduce it, whether in a newspaper, magazine, or book. It would be extending this right of protection too far to say that the general public can be prohibited from knowing the personal appearance of great public characters.

Such characters may be said of their own volition to have dedicated to the public the right of any fair portraiture of themselves. In this sense I cannot but regard Mr. Corliss as a public man."

The Editorial Dropshutter.

The Dawn of Photography.—At the request of many of our readers, we expect to resume, next month, the publication of the series of papers upon the early history of the art. The first of this series appeared in June, 1892, under the title of "Early Daguerreotype Days." During the interval the writer has not been idle, and has succeeded in obtaining many interesting specimens and dates, that illustrate the gradual expansion of the heliographic art from the crude experiments of half a century ago, until now it is one of the most important helps to man in almost every department of the Arts and Sciences.

Kodak Park, where the Eastman sensitized photographic products are manufactured, is a very busy place just at present. A duplicate Solio plant, with twice the capacity of the present factory, is nearing completion; the new building where the Eastman dry plates are to be manufactured, is almost finished, and work is well started on the new building in which Western Collodion paper is to be made. This last addition to the plant is occasioned by the purchase of the Western Collodion Company's business from Messrs. Kilborn & Kurtz, of Cedar Rapids, Iowa. The manufacture of the paper will be continued in Cedar Rapids, however, until the plant at Rochester is in running order. The Eastman Company now makes nearly every photographic essential: gelatine and collodion printing-out papers, dry plates and films, half a dozen kinds of bromide papers, transparency plates, thirty styles of hand cameras, view cameras, tripods, and about everything a photographer needs except a lens, and they are in close touch with and but a few minutes' walk from the largest and best-known lens factory in the United States. The growth of this concern in the last decade has been a marvel, and Kodak Park, where all the sensitized products are manufactured, is the largest plant in the world devoted to the manufacture of photographic products, having a floor-space of three and one-half acres.

Upheld by Photographs.—In the case of Adam Clark Tietz against the Philadelphia Traction Company, to recover damages for personal injuries received in a collision between cars of the defendant company on September 30, 1892, which resulted recently in a verdict in Tietz's favor for \$26,960, the Judges of Court No. 3 refused to grant a new trial. Tietz, in the accident, received injuries which caused a curvature of the spine, and incapacitated him from attending to his business. During the trial he was in the court room, and photographs, taken under the supervision of eminent physicians as to the nature and character of his injuries, were exhibited.

A Unique Portrait.—A miniature portrait of Mary, Queen of Scots, believed to be from life, has been on exhibition in Tiffany's show window, in Union Square, New York. It has never been publicly exhibited before; but as it belongs to Monsignor Seton, of Orange, New Jersey, in whose family (the Setons of Parbroath, Scotland) it has been held as an heirloom from the days of David Seton, Comptroller of the Scottish Revenue from 1580 to 1595, there can be little doubt of its authenticity. It appears to be painted on ivory, and is set in an antique wooden frame. The Queen's face is pale but handsome.

A Scientific Problem.—A Jamestown, New York, special, of December 20 says: This morning Coroner Bowers, accompanied by Fred. S. Marsh, a local scientist, went to the house of Winslow Shearman, where Mrs. Shearman and Mrs. Davis were murdered by an unknown assassin last Saturday, and made a microscopic examination of the eyes of the dead woman. Nothing was revealed in the eyes of Mrs. Davis, but on one of those of Mrs. Shearman the form of a man was distinctly photographed. The microscope used enlarged the object viewed 400 times. The picture, as revealed, did not show the face of the man who is supposed to be the murderer. The man's position was such, according to those who made the examination, that the body was shown only from the breast down to the feet. After the first surprise of the startling discovery made by Mr. Marsh was over, he made a most careful examination, which clearly revealed the man's form. He was apparently a big man with a long, heavy overcoat unbuttoned, and which reached below the knees. The wrinkles on the trousers could be plainly seen, and one foot was behind the other, with the knee bending as if in a stooping posture, about to take a step. Dr. Bowers, the Coroner, then made an examination, and says he saw the picture as distinctly as he could have seen a man standing in front of

him. E. G. Partridge, Albert Hazeltine and the Rev. Stoddart, who were at the house when the examination was made, were called into the room and examined the eye, each one of them verifying the statement by describing the man in similar language. The eyes of Mrs. Shearman were both removed and brought to this city, where a scientific process of photographing them was used in hopes of securing a photograph of the picture shown in the eye.

Later advices inform us that the expert micro-photographers failed to reproduce by their delicate art the image of the murderer which they had sworn to have beheld upon the retina of the eye of the victim of the Chautauqua farm tragedy, but this by no means invalidates the credibility of their previous declaration.

The negative imprinted upon the retina of the dead woman's eye was undoubtedly lost during the removal of the eye from the socket and the subsequent photographing process. It would be impossible to preserve this final image of the eye under such strong light as was necessary for the operation of micro-photography. There is no reason to doubt, however, the sober testimony of the witnesses in the case, among them a clergyman of high standing. The two photographers themselves would otherwise have known what a light failure to reproduce the image would put them in before the public.

The admissibility of any such evidence in Court, would be, of course, out of the question; but by means of unaided microscopy it does not seem altogether improbable that the detectives may avail themselves in certain cases, such as this of Mrs. Shearman, of a valuable clew to the identity of a murderer.

Executive Clemency Misplaced.—Henry Zink, who was a convict in the Jeffersonville Prison, and was pardoned by President Cleveland early in December, has been calling on his old acquaintances in Louisville, Ky. His offense was the sending of obscene photographs through the mails. The dispatch from Washington announcing his pardon stated that it was granted upon certificates of physicians that he was in the last stages of consumption. If this is true, fraud has been practised upon the President. Zink is a picture of health, and says he never felt better. He gained ten pounds while in prison. The same influence which procured his pardon caused him to be treated in prison as a special guest. He had nothing to do, and the only deprivation he suffered was that of his liberty. He was well fed and was supplied with all the reading matter he desired. Twice a week his wife was permitted to be with him for half a day.—*N. Y. World.*

A Memorial Celebration.—A memorial celebration in honor of the life and works of the late professor Hermann Helmholtz was held in the hall of the Song Academy at Berlin, December 14th, 1894, the services beginning at noon. A large gathering was present, including the Emperor and Empress, the faculty of the University of Berlin, the members of the Ministry and Municipality, the members of the Reichstag, and many other distinguished persons. Herr Joseph Joachim, the celebrated German violinist, was among those who took active part in the exercises, and won enthusiastic applause by his rendition of Schumann's "Abendlied." An address eulogistic of Helmholtz was delivered by Professor Bezold. An immense bust of Helmholtz, almost buried in flowers, occupied the centre of the stage.

How a Great Newspaper is Illustrated.—Among the features which have helped the growth of the *Philadelphia Inquirer* and added to its popularity have been the graphic illustration of current events by first-class artists, and the daily serving up of some spirited cartoon, dealing with local or national topics or personages. The artists' rooms and the mechanical art department are admirable lighted, and are in every way adapted for the purpose to which they are to be put.

The staff of five artists are accommodated in roomy quarters on the east side of the building, and the room receives light from the east and the north. In addition to the cartoon artist, whose energies are devoted to the production of the work which creates daily comment when it appears on the front page of the paper other artists devote their time to the production of drawings to illustrate stories, sketches to go with news articles, and the reproduction of photographs. Still other work done in this department is the designing of ornamental heads for pages of the Sunday edition, initial letters, and the many other productions of the pencil which add to the attractiveness of the paper. Like the members of the editorial and reportorial staff the artists are not to be found on duty during the morning, but some of them remain each night until midnight, and there have been times when it has been possible by this arrangement to produce the next morning pictorial representations of happenings just before midnight, and portraits of persons mentioned in telegraphic dispatches received in the small hours. On one occasion two portraits of an eloping couple were brought in by a reporter at 11 o'clock at night. Both pictures appeared the following day, and, as a result, the police in West Philadelphia, guided by the photographs,

were enabled to arrest both the man and the girl, and restore the latter to her friends.

The photo-engraving plant consists of five rooms, including two dark-rooms, a machine-room, an engraving-room and etching-room. It is equipped with a 6,000 candle-power electric light used in focusing, and also possesses lenses of extraordinary power. This department employs four men, and is run until almost the minute when the forms are locked; for the processes so far perfected and adopted do not permit a zinc etching to be made with the same rapidity with which type is now set—although the speed with which the work is produced is well-nigh incredible to those outside of the office.

In charge of the chief of the mechanical department of the art-room is the vast stock of portraits and other cuts which accumulates day after day. Every cut is indexed, and if occasion arises when it is decided to reproduce the cut it can be found with little trouble. Ranged around the rooms and on the walls are original drawings, many of great merit, the reproductions of which first saw the light in the pages of the paper.

An Eclipse Photograph.—Professor Schaeberle stated a year ago in *The Observatory* that the eclipse photographs taken by him in Chile, in April, 1893, showed a comet-like structure in the corona near the sun's south pole. An examination of the photographs taken by the British observers in Africa and Brazil was made, but no traces of cometary matter could be found on any part of them. Professors Schaeberle and Holden, however, were confident that a comet was photographed upon the corona of the 1893 eclipse, and they accordingly sent copies from negatives obtained at Chile, Brazil and Africa to W. H. Wesley. The latter, having examined the photographs, announces that they clearly indicate a cometary structure in the corona. The object is extremely faint, and appears like a forked coronal ray. By measuring the angular distance of the object from the moon's limb on the photographs taken at the different eclipse stations, Mr. Wesley finds these measurements place the nature of Professor Schaeberle's interesting discovery beyond a doubt.

Errata.—In the formula for a "New Reducer for Dense Negatives," on page 575, Vol. XV. (December, 1894), read *grains* for *grams*.

Photographic Hints and Formulae.

Gold Waste.—The *Photographic News* in answer to a correspondent states that, "There is certainly a quantity of gold in a spent toning-bath which is recoverable. The best way of doing this is to add to the liquid a solution of protosulphate of iron. A black precipitate will be thrown down, which will consist of carbonate and oxide of iron, mingled with particles of metallic gold. Send this precipitate, collected on a filter paper, to your refiner.

How it was Made.—From a photograph to an engraving in a couple of hours. At nine o'clock on the evening of the opening of the new offices of the Philadelphia *Inquirer* a photograph of the front office, with all its decorations, and with the groupings of some of its visitors, was taken by flash-light, and before the negative was dry, at 9.20, it was in the artist's hands. As it appeared in the next morning's issue, the picture was drawn by eleven o'clock, and was sent into the engraving room, where the cut was made. This was sent into the composing-room, put in the form, along with other matter, and sent into the stereotyping department, where the matrix was made and the cylindrical plates cast. At 12.50 a.m. the latter were in position on the rotary presses, and the page, picture and all as it now appears, was ready to run off. This was a remarkable performance, as viewed from the standpoint of older methods, but it only serves to illustrate the extent of the resources of a modern newspaper, and the completeness of its facilities.

The Seraph Lens Combination.—This series of lenses has heretofore been advertised and sold as a combination suitable for regular time exposures only. The agents, to their surprise, lately received an order from San Francisco, Cal., ordering a 5x7 Detective Camera to be fitted with a 5x7 Seraph Combination and the quickest shutter that could be obtained. Enclosed with this order came a picture of a young man jumping over a tennis net, made with above lens. As this is one of the severest tests to which a lens can be subjected, the Combination will hereafter be recommended for instantaneous as well as time exposures.

New Photograph-Holders.—Photograph frames are rarely artistic objects in themselves, or at least so the critics say, and the prevailing opinion seems to be that anything will answer for the framing

of a face. Elaborate needlework and painting that is more or less bad, and even ornate, conspicuous brass, all have had their day, and each in turn has served to conceal the very points of a photograph which should be seen in relief if one hopes to get the best effect. This season, however, a new style has arisen, and the opportunity for getting a really good thing is near at hand. Some enterprising dealer has discovered a means of so treating plaster as to give it a most perfect tone and to make it quite lasting. Among other good things which he has evolved from it frames for photographs take a prominent place. They are copied from antique and thoroughly artistic models, and are tinted a dull, fascinating green, which runs into a creamy white. They are delightful in design, yet they sell for a small sum.

American Hypo.—Walter Sprange, editor of the Photographic Blue Book, in a letter to the Walpole Co., under date of Dec. 4th, 1894, states: "Today I found the Hypo sent me about a year ago just as *fresh and dry* as it had first come from you, while hypo bought in London has *disappeared* and *soaked all its surroundings*."

To Check Development.—Various suggestions have been made as to methods of completely stopping the development of a gelatino-bromide negative plate, and one of the most convenient methods is to use an alcoholic solution of bromide of cadmium, as by this means one at the same time charges the film with bromide, and eliminates the water. The *Revue Suisse* recommends the following bath:

Bromide of Cadmium 1 ounce.

Alcohol 18 fluid ounces.

After five minutes immersion in the bath the negative may be exposed even to direct sunlight, and can be preserved any length of time before being fixed.

Mending Cracked Negatives.—To make a cracked negative fit for use, Dr. Miethe recommends the following process: Place the broken negative, the film of which must be intact, film side down upon a metal plate which has been heated so that it can hardly be touched by the hand. The break is then covered with Canada balsam, which readily melts and fills up the cracks. To give the negative more stability, a large piece of the Canada balsam is put upon the centre of the back of the negative, and a clean glass plate, the same size as the negative, is laid over all. The melted balsam spreads out evenly, the excess being squeezed out. After cooling, the plates are still further fastened around the edges with strips of Sheplie gum paper.

Photographic Literature.

A New Work on Chemistry.—"An Elementary Course in Organic Pharmaceutical and Medicinal Chemistry" is the somewhat lengthy title of a new text-book by Prof. Frederick J. Wulling of the Minnesota State University (received from the J. B. Lippincott Company). This work, as the title sets forth, is primarily designed for students of Pharmacy and Medicine, but it is of equal, if not greater value, to the intelligent photographer. The work is thorough and exhaustive and should be in the hands of every one who practices photography. The work is not merely a text-book, but it also treats of the history as well as the uses of the different elements. The chapter on water and the halogens is alone worth what it costs to buy the book.

Cramer's Gems.—One of the handsomest books ever issued to illustrate the advance made by photographic processes, both artistic and mechanical, comes to us under the title "Gems from the Prize Exhibit of G. Cramer Dry Plate Works, St. Louis Convention, P. A. of A., 1894." It consists of about fifty photographic gems by some of the leading photographers in the country, every one of whom has probably contributed some of his best efforts. The reproductions are engraved and printed in half-tone by the National Chemigraph Company of St. Louis, and are certainly a great credit to that establishment, as they are an exemplification of the great possibilities of the photo-mechanical half-tone process when the original negatives are made upon a plate having the good qualities of the Cramer plate. The Cramer Company deserve the thanks of every member of the Convention for the preservation in popular form of the gems of their fine exhibit.

"**A Painter's Views on Photography**" is the title of a paper in the *Studio*. There is nothing in these "views" which has not been said before. It is the old story, that the photographer can at present deal only with what is observed by the mechanical eye with which he works, ignoring the fact that to direct that eye properly the brain of the photographer is necessary. The writer seems to imagine that the photographer's aim is to imitate the engraver on the one hand, and the painter on the other. But surely this is not quite accurate. Correct composition and a proper disposition of light and shade are common to all artistic pictures, no matter how they may be produced. Surely a photographer is not to be blamed because he tries to introduce these qualities into his work.—*Photographic (London) News*.

The American Annual and Photographic Times Almanac for 1895.—This Annual is received, and it certainly surpasses its predecessors in every respect, both in matter and illustrations. The papers are concise and practical, the selection of subjects and pictures good, while the calendars, formulæ and tables are invaluable to all photographers, irrespective of class or station. We are not ashamed to acknowledge that we keep the annual handy for reference upon our desk. The present year is the ninth of its publication. 20,000 copies is the size of the present edition, and from appearances this number will soon be exhausted.

Die Bedeutung der Amateur Photographie von Alfred Lichtwark, issued at the instance of the Hamburg Amateur Exhibition Society, from the press of William Knapp, Halle a. S., Germany. This superb work in the interest of advanced amateur photography is divided into four parts, viz.: The meaning of Amateur Photography; the Amateur and Nature; the Nations and their representatives at the Exhibition; the History of the Exhibition. The book is embellished with numerous photogravures and autotypes. To say that the work is a product of the "Knapp" establishment means that the typography and illustrations are as near perfect as it is possible to get them with present appliances.

Blue Book of Amateur Photographers for 1894.—British edition, edited by Walter Sprange. This handy volume for reference has been received and is well printed and illustrated. The American edition for 1895 is in active preparation, and will be a universal handbook and directory for all interested in photography. It will also contain an international calendar of photographic exhibitions, as well as a revised directory of photographic and allied scientific societies in the United States and Canada. Both editions may be obtained from the compiler, Walter Sprange, at Beach Bluff, Mass.

Literary Note.—*The Photographic Times* will in future appear as a monthly Photographic Art Magazine. The January number, just published, contains a superb photogravure frontispiece, besides many illustrations, including some beautiful half-tone reproductions. Among the numerous interesting articles are: "The Portraiture of the Moon," by Walter E. Woodbury, editor of the magazine; "The Kinetoscope, Kinetograph and Kinetophonograph," and "On the Road to the North Pole with a Camera," by the official photographer of the Dr. Cook Arctic Expedition. All the articles are well illustrated with numerous photographic reproductions.

Society Notes.

Minneapolis Camera Club.—A good-sized audience enjoyed an exhibition of 200 lantern slides of the World's Fair at the rooms of the Club, on the evening of December 2d. The views were made by the amateur photographers in the different camera clubs composing the American Lantern Slide Interchange, and speak highly for the makers. From here the slides go direct to New York, and then are to be sent to Europe and Japan for exhibition. This was the first of a series of stereopticon exhibitions which will be given by the club during the winter, and all of them are free to members.

The Secretary's Bulletin of the Photographic Society of Philadelphia announces a course of lectures to be held at Association Hall on the following dates:

Tuesday, January 15, 1895, "Yellowstone Park in Natural Colors," by Messrs. Frederic E. Ives and William M. Jennings.

Tuesday, January 22, 1895, "In the Tropics," by Dr. Benjamin Sharp.

Tuesday, January 29, 1895, "Switzerland and Northern Italy," by Mr. Frederic E. Ives, illustrated with photographs in the colors of nature, made by himself.

Among the future events to be held at the Society's rooms are the following announced entertainments, viz.:

Mr. W. G. Chase, of the Boston Camera Club, an illustrated lecture on "London Street Cries"; Mr. Frederic E. Ives, the Stereo-Photochromoscope; Mr. John G. Bullock, a collection of lantern slides from his own negatives; Mr. Oscar Knipe, another series of "Experiments with Light"; Mr. James Lawrence Dillon, a wall display of animal studies; Mr. William N. Jennings, a wall display of "Jove's Autographs"; Mr. Henry G. Bryant, an illustrated talk on Greenland; Dr. Benjamin Sharp, a lecture on "Out of the Way Places in Europe"; Mr. William H. Rau, a lantern talk on the "Vessels of our New Navy."

The Twenty-Third Regiment (Brooklyn) Fair.—Although the Brooklyn societies had some excellent exhibits at the photographic exhibition at the Twenty-third Regiment Fair, only a few of the awards were given to Brooklyn amateurs. The majority went to the New York Society of Amateur Photographers, and it is not to be wondered at, as the exhibit of the New York Society was magnificent.

In the Twilight Hour.

ARE you in a rut?

AS a rule, we do not need the things we cannot have.

THE world is hard to please, and even then it must be with a low standard.

GOGGLE-EYED envy, magnifying and coloring others' blessings, forgets its own.

THE heart is a leaky vessel; it won't hold vinegar—it soon appears in the countenance.

NO man is wholly bankrupt so long as there is integrity in his heart and a ray of sunshine in his face.

MOST people would exchange their lot with most other people with gladness, but would re-exchange with glee.

DON'T kick the world. You bruise your own toes, and the world is so large and callous it never knows itself kicked.

PUT a smile on your face when you go out for a walk, and it will be surprising how many pleasant people you will meet.

IT is not work that kills men, it is worry. Work is healthy, worry is the rust on the blade. It is not the revolution that destroys the machinery, but the friction—*Beecher.*

MANY would be well off if they could but think so. A little sprig of the herb called content put into the poorest soup will make it taste as rich as the Lord Mayor's turtle.—*John Ploughman.*

THERE is always a best way of doing everything, if it be to boil an egg. Manners are the happy ways of doing things; each one a stroke of genius or of love, now repeated and hardened into usage.—*R. W. Emerson.*

THE world would be better if you were.

A LITTLE seeing saves much looking; a little speaking saves much talking.

REPUTATION is what the world thinks of us; character is what God thinks of us

THERE are two things we should never worry about; that which we *can* help, and that which we *cannot* help.

ALWAYS look out for the sunshine; note the bright day rather than the dark, so shall you find it natural to abound in thanksgiving.

CONSCIENCE and character are synonymous. There is no genuine character for good without conscience, and no lack of character where conscience abounds.

NEVER bear more than one trouble at a time. Some people bear three kinds—all they have ever had, all they have now, and all they expect to have.—*Edward Everett Hale.*

PUT your foot down where you mean to stand, and let no man move you from the right. Learn to say "No," and it will be of more use to you than to be able to read Latin.—*John Ploughman.*

MANY good people fail in refusing to do small things or fractions of great things, because they are unable to do the greatest things. No service which is prompted by love and obedience is slight in the sight of God.

LEARN to make a right use of your eyes: the commonest things are worth looking at, even stones and weeds, and the most familiar animals. Read good books, not forgetting the best of all. There is more true philosophy in the Bible than in all the books of all the skeptics that ever wrote.—*Hugh Miller.*

Personal Notices.

A Delicate Scene at Nuremberg, Germany, is the frontispiece of the *AMERICAN JOURNAL OF PHOTOGRAPHY* (Philadelphia) for December, illustrating in part a valuable essay on "Commercial Photography" by Julius F. Sachse. Other leading articles are "Cloud Photographs," "Platinochlorides," "The Stability of the Aristotype," "The Anaglyph," "The Grain Weight," and "A Process of Photographing in Colors." "The Editorial Dropshutter," "Society Notes," "Photographic Hints and Formulæ," and other departments, are well filled with the lore of the manufacture of sun-pictures and the science of instantaneous portraiture. There is a sharp and admirably-finished flash-light photograph of a familiar operatic scene, with striking portraits of all the players, in this issue, which is a capital one in every particular. —*Evening Bulletin (Phila.), Dec. 12, 1894.*

THE AMERICAN JOURNAL OF PHOTOGRAPHY, published by Thomas H. McCollin & Co., Philadelphia, is another one of the good magazines published in the interest of photography, and its issues are always interesting. It is a great favorite among amateurs. The current number contains writings on "Lights and Shadows," "Inconsistencies of Illustrations," "Technical Characteristics of Pictorial Art," "Naturalism in Art," "Professional Models," "Complementary Colors," "Photographic Reproductions of Chalk Drawings," "Cents are Legal Tender," "Disraeli's Lasting Work," and "Aluminum and Nickel Alloy." —*Standard Union, Brooklyn, Nov. 19, 1894.*

PATENT NEWS.

The following list of patents relating to the Photographic interests is especially reported by Franklin H. Hough, Solicitor of American and Foreign Patents, No. 925 F St., Washington, D.C.

529,369—Camera. A. Delug, Munich, Germany.

529,183—Photographic mounting. J. W. McCabe, New York City.

The suit brought by E. and T. Anthony & Co. against the Eastman Kodak Co. for alleged infringement of the Roche patents on bromide paper has been withdrawn. This was a counter action brought by the New York concern against the Eastman people who are suing for infringement of patents on the machinery used in coating bromide paper. This abandonment does not indicate a compromise, for although the Anthonys have abandoned their suit, the Kodak Co. is pressing vigorously its suit under the coating machine and process patents.

BARGAIN LIST.—DEC., 1894.

Lenses:

1—Set 1-9 Lenses,	\$15 00
1—3 B Dallmeyer lens for cabi- nets	130 00
1—4x5 R. R. Gundlach Lens, . .	7 00
1—5x7 R. R. Dallmeyer Lens, .	25 00
1—4x5 Wide Angle Lens	4 50
1—5x8 " "	6 00
1—6½x8½ " "	8 00
1—8x10 " "	10 00
1—11x14 " "	18 00
1—5x7 Euryscope Lens with Prosch Shutter	35 00
1—½ size Usiner Lens	12 00
1—¼ " "	8 00
1—No. 1 6½x8½ Euryscope Lens, list 45 00	30 00
1—6½x8½ Gundlach Single Lens	3 50
1—16x20 W. A. Darlot Lens . .	35 00
1—8x10 View Lens and Shutter .	12 00
1—8x10 R. R. Gundlach Lens . .	16 20
1—Pair Waterbury Stereo Lenses	4 50
1—8x10 Waterbury Lens	5 00
1—Cabinet Portrait Lens	20 00
1—8x10 Peerless Portrait Lens .	30 00
1—Set 1 9 Gem Lenses	18 00
1—4x5 Darlot Wide Angle Lens	10 00
1—R R Detective Camera Lens .	3 00
4—½ tubes in plate	12 00
1—½ Voigtlander Lens	9 00
1—6½x8½ E. A. Single Lens . .	5 00
1—4-4 Harrison Portrait Lens, no stops	16 00
1—4-4 Jamin Globe Lens	12 00
1—¼ size Holmes, Booth & Hay- den Lens	4 00
1—¼ size Harrison Lens	4 00
1—¼ size Gem Lens	1 50
1—5x8 R. O. Co's. Single Lens .	2 50
1—¼-size Voigtlander Lens . .	6 00

HAND CAMERAS.

1—No. 1 Kodak,	10 00
1—A Ordinary Kodak, new, . .	5 00
1—5x7 Folding Kodak, new, list \$65,	55 00
1—4x5 Climax Detective Camera, leather-covered, new, list \$32	20 00
1—4x5 Turnover Camera, new, list \$25	15 00
1—4x5 Montauk Detective Cam- era, new	20 00

VIEW CAMERAS.

1—4x5 New Model Improved Cam- era, Wrav lens, 6 extra holders, 28	00
1—5x7 Wet Plate Camera	2 00
1—6½x8½ Eastman Camera, 3 holders, Magister R. R. Lens, 40	00

1—5x7 Victoria Camera and 4 lenses	\$18 00
1—5x8 New Model Camera, three holders	10 00
1—4¼x6½ Universal Camera, six holders, tripod, Euryscope lens and Prosch shutter, all in good order	60 00
do do without lens	25 00
1—5x7 Victoria Camera	8 00
1—8x10 Eastman Reversible Back Camera	25 00
1—3¼x4¼ New Model Improved Camera, new,	9 00
1—5x8 Blair Camera, 6 holders, 8x10 Attachment, 5 holders, and Euryscope lens,	45 00
1—6½x8½ Novelette Camera, new	20 00
1—5x8 Blair Single Swing View Camera	15 00
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1—Eclipse Outfit, 3¼x4¼, . . .	2 00

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1—11x14 Portrait Camera, with 8x10 back and holder	60 00
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1—20x24 Glass-bottom Tray . .	2 00
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1—8x10 Knickerbocker Camera Stand	5 00
1—Corner Chair, Drab Velvet, list 20.00	10 00
7—6½x8½ Perfection Holders for Universal Camera, each . . .	1 15
1—No. 2 Combination Tripod, list 3.50	2 50
1—Cooper Enlarging Bromide Lantern, 8 in condenser . .	40 00

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13—6½x8½ Dry Plate Kits, assorted openings, each	25	1—Osborne's Rock Accessory, new,	10 00
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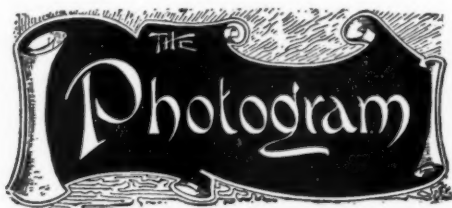
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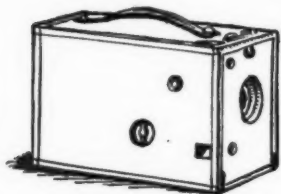
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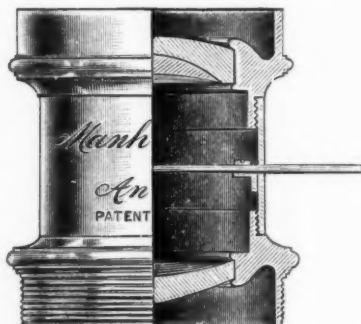
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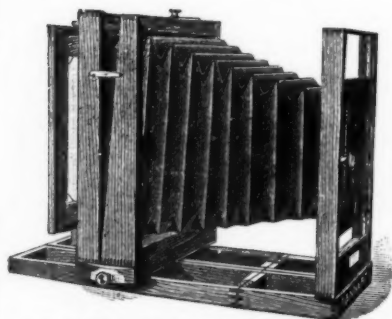
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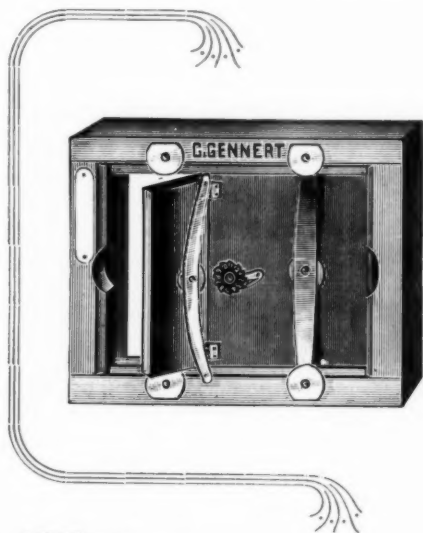
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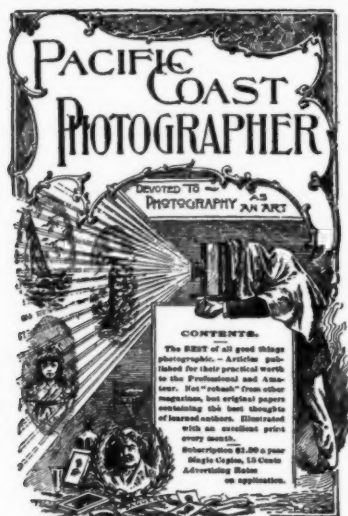
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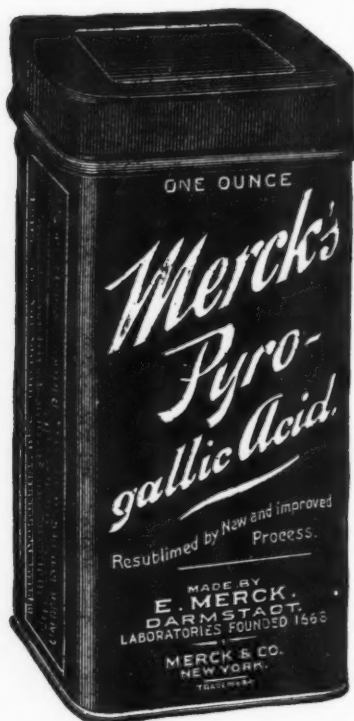
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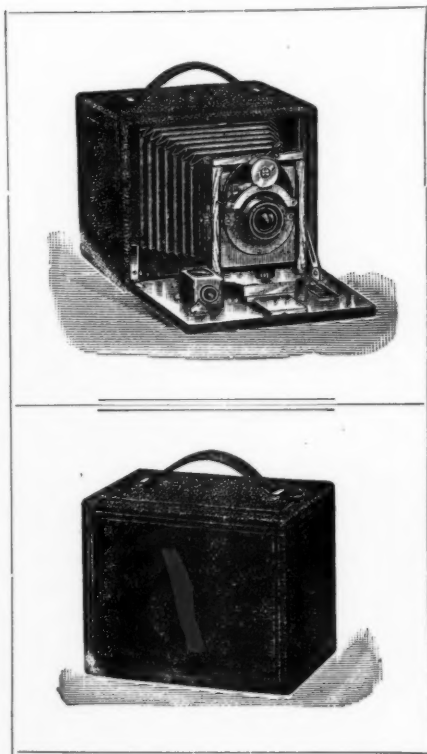
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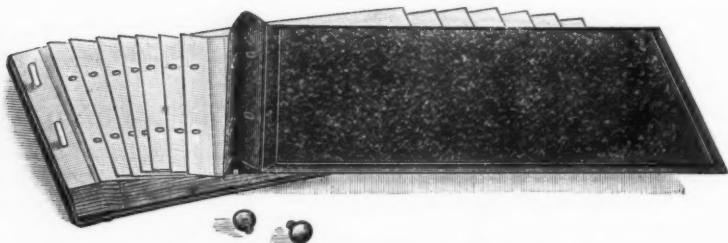
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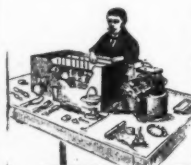
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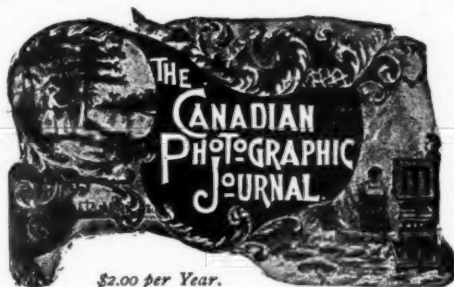
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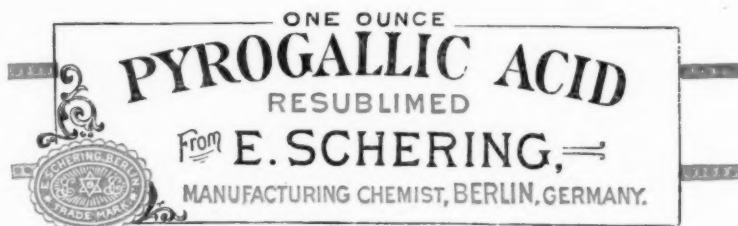
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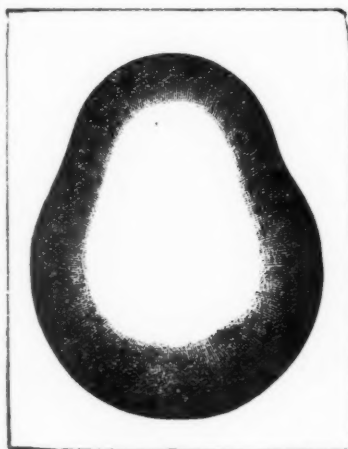
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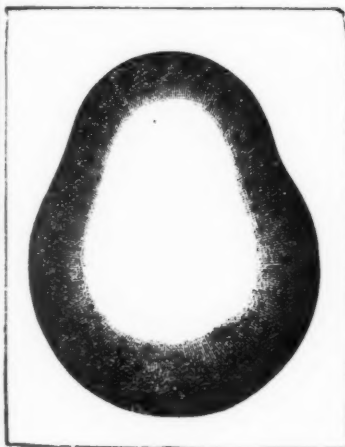
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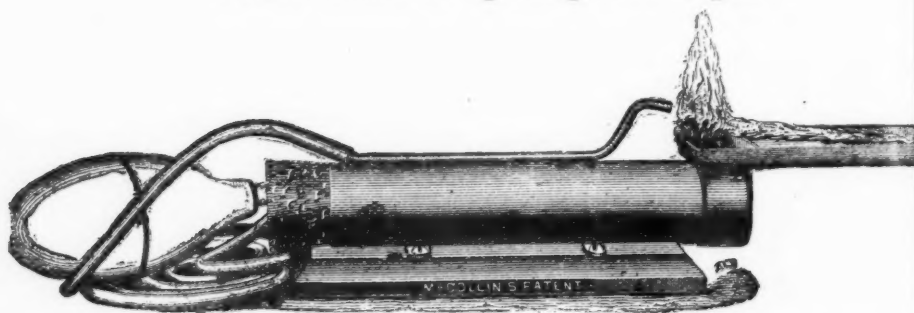
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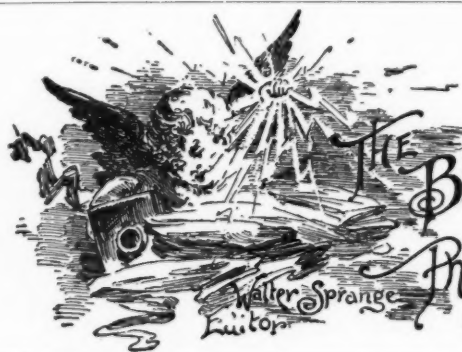
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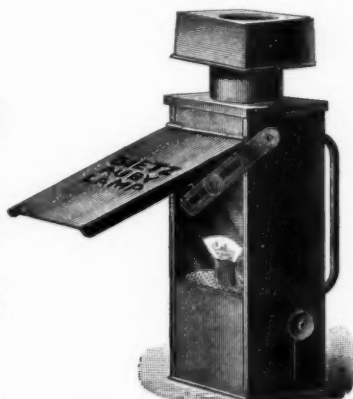
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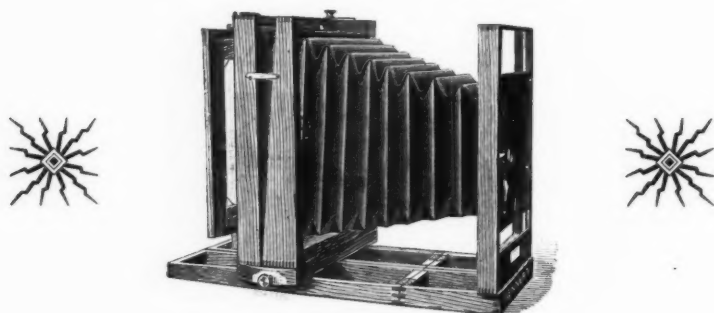
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